

I claim:

1. A manufacturing method of secondary battery comprising the steps of:

- a. coating active material onto conducting material;
- b. trimming said conducting material into positive plates and negative
5 electrode plates;
- c. alternately arranging said positive and negative electrode plates in
proper order on a strip-shaped separator;
- d. folding and stacking said positive and negative electrode plates on said
separator according to their arrangement order to let said positive and
10 negative electrode plates be separated by said separator and opposed
faces between said positive and negative electrode plates have said
active material coated thereon.

2. The manufacturing method of secondary battery as claimed in claim 1,
wherein positive electrode active material is coated on one face of each of
15 said positive electrode plates opposed to one of said negative electrode
plates, and negative electrode active material is coated on one face of each
of said negative electrode plates opposed to one of said positive electrode
plates in said Step (d).

3. The manufacturing method of secondary battery as claimed in claim 1,
20 wherein said positive and negative electrode plates are adhered on said
separator, and a front separator, a rear separator and an intermediate
separator between said positive and negative electrode plates are formed on
said separator in said Step (d).

4. The manufacturing method of secondary battery as claimed in claim 1,
25 wherein said positive and negative electrode plates are completely adhered

on said separator, and said separator is thermally fusible and can be formed by hot embossing in said Step (d).

5 5. The manufacturing method of secondary battery as claimed in claim 1, wherein the first and second electrode plates in said Step (c) is of the same polarity, and said electrode plates of the same polarity are one-side coated with active material.

6. The manufacturing method of secondary battery as claimed in claim 1, wherein the last two electrode plates in said Step (c) are one-side coated with active material.

10 7. The manufacturing method of secondary battery as claimed in claim 1, wherein a conducting tab protrudes out of each of said positive and negative electrode plates, and said conducting tabs of the same polarity are at the same side after said positive and negative electrode plates are folded and stacked.

15 8. The manufacturing method of secondary battery as claimed in claim 1, wherein said electrode plates are alternately arranged in order with two positive electrode plates and then two negative electrode plates, and the last two electrode plates are electrode plates of different polarities.

20 9. The manufacturing method of secondary battery as claimed in claim 1, wherein said electrode plates are alternately arranged in order with two negative electrode plates and then two positive electrode plates, and the last two electrode plates are electrode plates of different polarities.

25 10. The manufacturing method of secondary battery as claimed in claim 8, wherein said first two positive electrode plates can be replaced with a positive electrode plate double-side coated with active material and a

vacancy for connecting an electrode plate of the opposed polarity.

11. The manufacturing method of secondary battery as claimed in claim 9,
wherein said first two negative electrode plates can be replaced with a
negative electrode plate double-side coated with active material and a
5 vacancy for connecting an electrode plate of the opposed polarity.

12. A secondary battery device comprising a battery core, positive electrode
tabs and negative electrode tabs, said battery core comprising a plurality of
positive and negative electrode plates separated by a separator, and said
separator between said positive and negative electrode plates is a
10 continuous strip-shaped separator.

13. The secondary battery device as claimed in claim 12, wherein positive
electrode active material is coated on one face of each of said positive
electrode plates opposed to one of said negative electrode plates, and
negative electrode active material is coated on one face of each of said
15 negative electrode plates opposed to one of said positive electrode plates.

14. The secondary battery device as claimed in claim 12, wherein the length
and width of said positive electrode plate can be smaller than those of said
negative electrode plate.

15. The secondary battery device as claimed in claim 12, wherein two side
20 edges of said positive and negative electrode plates are sheathed by said
strip-shaped separator to avoid short circuit between said positive and
negative electrode plates.

16. The secondary battery device as claimed in claim 12, wherein said positive
and negative electrode plates are adhered on said strip-shaped separator.

25 17. The secondary battery device as claimed in claim 12, wherein said separator

is thermally fusible, is completely adhered with said positive and negative electrode plates, and is formed by hot embossing.

18. The secondary battery device as claimed in claim 12, wherein glue can be applied on said separator to fix said battery core.

5 19. A manufacturing method of a secondary battery, said secondary battery comprising a separator and a plurality of electrode plates, said separator being strip-shaped and comprising a first face, a second face and a bent end, said manufacturing method comprising the steps of:

10 arranging a plurality of said electrode plates of the same polarity on said first face in increasing spacing starting from said bent end;

arranging a plurality of said electrode plates of the opposed polarity on said second face starting from the second plate on said first face to let said separator have two layers of electrode plates of different polarities; and

15 folding in order the first electrode plate on said first face in the direction of the first electrode plate of the opposed polarity on said second face.

20. The manufacturing method of secondary battery as claimed in claim 19, wherein the last two of said continuously arranged electrode plates of the same polarity on the first layer can be one-side coated with active material.